

Network

CREATIVE®

Model 2030

Supports
IEEE 802.11b

BLASTER®

Wireless LAN USB Adapter



Getting Started



Wireless LAN USB Adapter

User Manual

Creative Network Blaster Wireless LAN USB Adapter 2030

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Safety Precautions

Safety Precautions

General Safety



To avoid the risk of fire, electric shock or personal injury, read the following before operating the product:

- ☐ Do not expose Wireless LAN USB Adapter to direct sunlight or excessive heat.
- ☐ Keep Wireless LAN USB Adapter in a place where there is minimum risk of liquid spillage on it.
- ☐ Do not place Wireless LAN USB Adapter in surroundings where the temperature is over 40°C (104°F).
- ☐ Avoid humid conditions. Do not place the product near a water source or outlet such as a bath tub, sink, wash bowl, laundry tub, swimming pool, or a wet or humid wall.
- ☐ Never clean the Wireless LAN USB Adapter with a damp cloth or liquid cleaner.
- ☐ Do not press or bend the electrical power cord; do not place any weight on it.
- ☐ In the event of a gas leak, do not use an electrical switch or any telephone equipment connected to a power outlet found in the vicinity of the leak.
- ☐ Do not use any electric product, electric cord, or power socket that is even partially damaged.
- ☐ Do not tamper with the internal assembly or circuit board of the Wireless LAN USB Adapter — none of its parts are user replaceable.
- ☐ Allow only qualified personnel to service or repair the Wireless LAN USB Adapter, if such is necessary.



FCC Radiation Exposure Statement



This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm (8 inches) between the in-built antennas and your body.



Introduction

Introduction

Welcome to Creative Wireless World! Connect the Creative Network Blaster Wireless LAN USB Adapter 2030 to your computer, and your computer becomes a wireless networking station. Using radio frequency (RF) signals, your computer will be able to share network resources and access other stations within a wired or wireless Local Area Network using Ad-hoc (peer-to-peer) and Infrastructure network modes.

Communication with a wired network is through an access point.



Wireless LAN USB Adapter

Before You Begin

This section contains information you should know about before using this manual. Read the information carefully before proceeding further.

Package Contents

- ☐ Wireless LAN USB Adapter 2030
- ☐ USB cable
- ☐ Quick Installation Guide
- ☐ CD-ROM containing drivers, utility, and User Manual.

Recording Model and Serial Numbers

Your Wireless LAN USB Adapter has a model number and a serial number located on the bottom side. After removing the Wireless LAN USB Adapter from its packaging, write down its model and serial numbers for future reference. You will need to quote these numbers when contacting our Technical Support office.

Minimum System Requirements




The following are the minimum system requirements:

- ☐ Intel Pentium® II 233 MHz processor or equivalent
- ☐ 20 MB of free hard disk space
- ☐ 32 MB RAM (64 MB recommended)
- ☐ Microsoft Windows® 98 Second Edition (SE), Windows 2000, Windows Millennium (Me) or Windows XP
- ☐ One available USB port enabled (version 1.0 compliant)
- ☐ CD-ROM drive

Document Conventions

This manual uses the following conventions to help you locate and identify the information that you need.

Table i: Document conventions

Text Element	Use
	This notepad icon indicates information that is of particular importance and should be considered before continuing.
	This alarm clock icon indicates that failure to adhere to directions may result in loss of data or damage to your system.
	The warning sign indicates that failure to adhere to directions may result in bodily harm or life threatening situations.



1

About Wireless LAN

About Wireless LAN

Wireless LAN

Wireless Local Area Network (WLAN), compared to a traditional wired LAN, is easy to setup and manage, so it saves you time and money.

A WLAN combines data connectivity with user mobility. You can move around in a room or move from one floor to another without being disconnected from the LAN. In most companies, a wireless LAN is an extension of a wired network. However, in small offices or hard-to-wire areas, it may be the only LAN solution.

Installation

Installing a WLAN is easy, convenient, and fast.

Cost

A WLAN is cost effective, as you do not have to install cables into your walls and floors. Multiple Internet users can share a single IP address.

Speed

A WLAN provides data speeds of up to 11 Mbps, which increases the access rate to shared resources.

Mobility

Unlike wired networks, a WLAN allows you to move around on a floor or building, or even across buildings, and still remain connected to the network.

Scalability

You can choose to configure your WLAN to Ad-hoc mode or Infrastructure mode. In Ad-hoc mode, a wireless computer (client) communicates with other wireless stations directly. In Infrastructure mode, wireless clients connect to an access point via radio waves, and the access point connects to other wireless and wired clients. It is easy to configure a WLAN when you need to switch from one topology to another.

Ad-hoc mode

In an Ad-hoc network, also known as a Peer-to-Peer network, each workstation in the network is both a server and a wireless client. Users on the network can share files, printers, drives and other peripherals, and access the Internet using a shared modem, as shown in Figure 1-1. However, users can only communicate with other WLAN computers that are in the WLAN workgroup and that are within a fixed range.

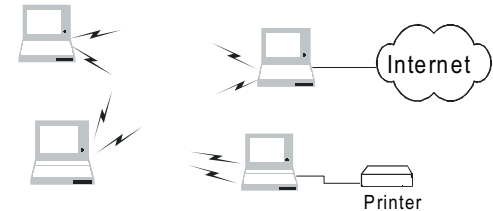


Figure 1-1: Ad-hoc network.

Infrastructure mode

In an Infrastructure network, wireless clients connect to an access point that is connected to a wired LAN, as shown in Figure 1-2. The access point allows a user on a wireless LAN to access an existing wired network, to connect to the Internet, E-mail, transfer files, and to share a printer. Moreover, the access point manages the bandwidth to maximize bandwidth utilization.

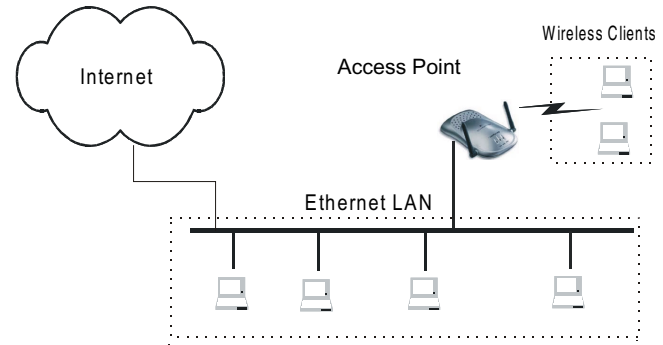


Figure 1-2: Infrastructure network.

Flexibility

Adding new users and rearranging office space is convenient as it does not require any additional wiring.



2

Installing Hardware

Installing Hardware

Creative Network Blaster Wireless LAN USB Adapter 2030 is equipped with a USB port that allows you to connect it to a computer. This chapter guides you through the process of setting up your Wireless LAN USB Adapter to the USB port of a desktop computer.

About Rear View of Wireless LAN USB Adapter

The USB port is located at the rear of the adapter (see Figure 2-1).

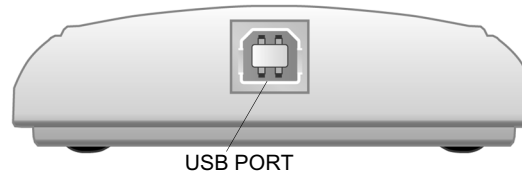


Figure 2-1: Rear view of the Network Blaster Wireless LAN USB Adapter

The Wireless LAN USB Adapter is shown in Figure 2-2. It has a built-in antenna for the transmission and reception of the radio frequency (RF) waves.

Power LED Indicates power status. The LED turns on when Wireless LAN USB Adapter, which gets its power from your computer, is turned on.

Link LED Indicates link status. The LED turns on when the adapter is active.

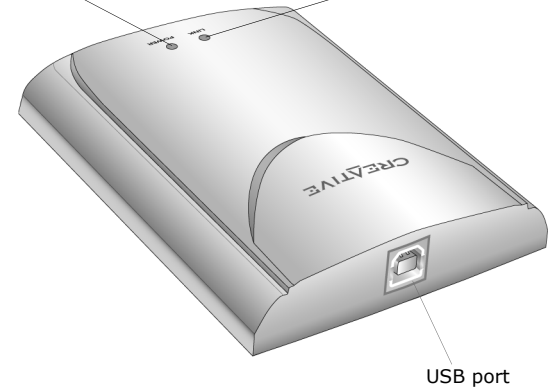


Figure 2-2: Network Blaster Wireless LAN USB Adapter

Your Wireless LAN USB Adapter comes with a USB cable that has different types of USB connectors at both ends (see Figure 2-3). The type A connector of the USB cable is the most common connector that fits into a USB port of a desktop computer. The type B connector of the USB cable connects to the USB port of your Wireless LAN USB Adapter.



Figure 2-3: The USB cable connectors



3

Installing and Uninstalling Drivers and Configuration Utility

Installing and Uninstalling Drivers and Configuration Utility



Install the drivers only after you have installed the hardware.

Before you begin to install the drivers for your Creative Network Blaster Wireless LAN USB Adapter 2030, be sure that your computer has USB ports and they are enabled, as there are some motherboards with disabled USB ports. In addition, some motherboards have USB interface with the USB ports extension but no ports, which means that you should purchase your own USB port and plug it to your computer's motherboard's USB interface. For more information on how to enable or install the USB port extension with USB interface only, consult your motherboard user guide or vendor.

Installing Drivers and Configuration Utility

In Windows 98SE

1. Turn on your computer.
2. With the USB cable provided, connect Wireless LAN USB Adapter to your computer. Windows automatically detects the USB device. The **Add New Hardware Wizard** dialog box similar to Figure 3-1 appears.
3. Click the **Next** button.



Figure 3-1: **Add New Hardware Wizard** dialog box

4. In the dialog box similar to Figure 3-2, click the **Search for the best driver for your device (Recommended)** option, and click the **Next** button.



Figure 3-2: **Add New Hardware Wizard** dialog box

5. In the dialog box similar to Figure 3-3, click the **CD-ROM drive** check box to select it. Insert the installation CD into the CD-ROM drive, and click the **Next** button.



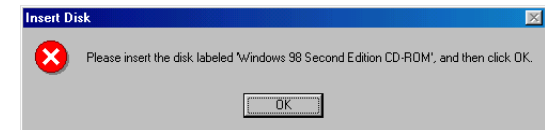
Figure 3-3: **Add New Hardware Wizard** dialog box

6. In the dialog box similar to Figure 3-4, click the **Next** button.



Figure 3-4: **Add New Hardware Wizard** dialog box

7. If the message box similar to Figure 3-5 appears, insert the Windows 98SE CD into the CD-ROM drive, then click the **OK** button. The **Copying Files** dialog box appears (see Figure 3-5).



8. In the **Copy files from** box, type **E:\Win98** (where E: represents your CD-ROM drive), and then click the **OK** button.

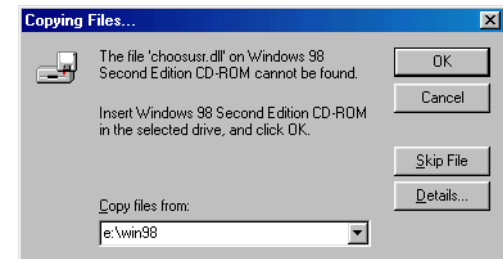


Figure 3-5: **Insert Disk** message box and **Copying Files** dialog box

9. In the next dialog box similar to Figure 3-6, click the **Finish** button.
10. When prompted, restart your computer.
Make sure the installation CD is in the CD-ROM drive.

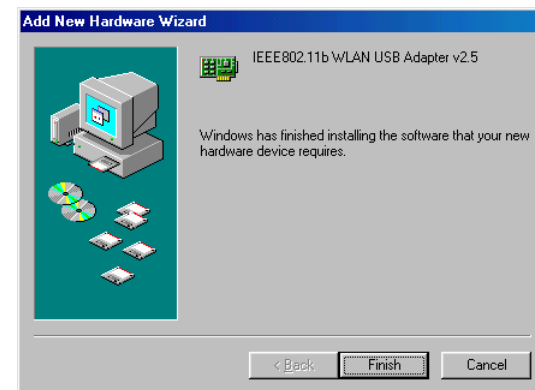


Figure 3-6: **Add New Hardware Wizard** dialog box



If the installation CD is not inserted into the CD-ROM drive, the **Wireless Utility Setup** message appears after the system restarts. Insert the installation CD and click the **Retry** button.

11. After restarting your computer, the **Network Blaster 2030-01 Setup** dialog box similar to Figure 3-7 appears.
12. Click the **Next** button.

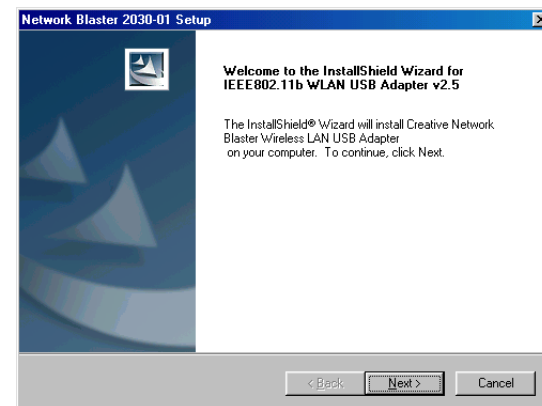


Figure 3-7: **Network Blaster 2030-01 Setup** dialog box

13. When the dialog box similar to Figure 3-8 appears, click the **Next** button.

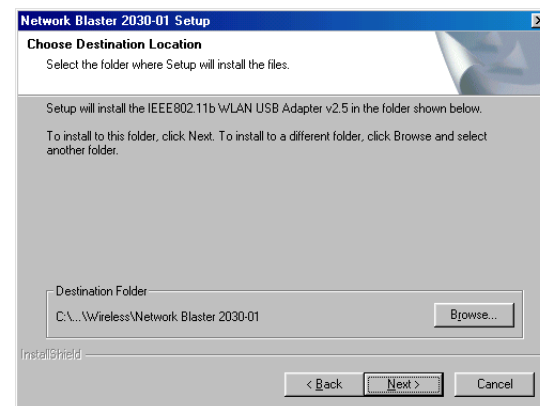


Figure 3-8: **Network Blaster 2030-01 Setup** dialog box

14. When the dialog box similar to Figure 3-9 appears, click the **Next** button.

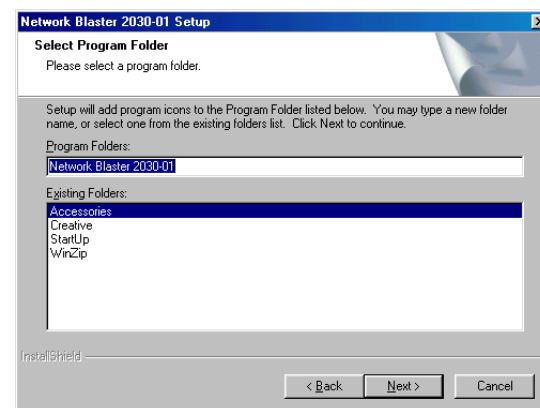


Figure 3-9: **Network Blaster 2030-01 Setup** dialog box

15. When the dialog box similar to Figure 3-10 appears, click the **Next** button.

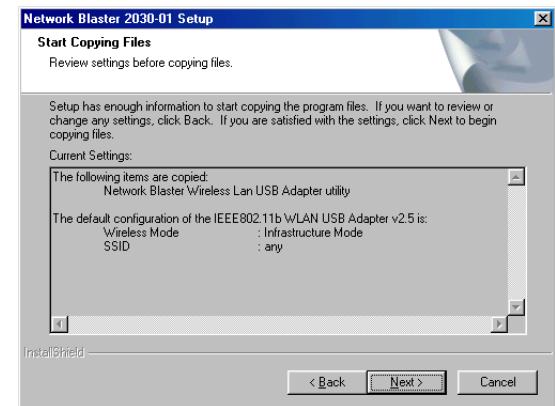


Figure 3-10: **Network Blaster 2030-01 Setup** dialog box

16. When the dialog box similar to Figure 3-11 appears, click the **Finish** button.

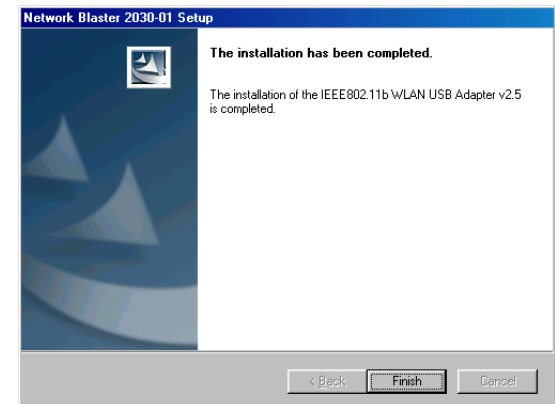


Figure 3-11: **Network Blaster 2030-01 Setup** dialog box



Figure 3-12: **Configuration Utility** icon



After you have installed the Wireless LAN USB Adapter's drivers, you must configure the Wireless LAN USB Adapter's settings. See "Configuring the Wireless LAN USB Adapter" on page 4-1.

In Windows 2000

Congratulations! You have successfully installed the Wireless LAN USB Adapter's drivers and Configuration Utility. The **Configuration Utility** icon (see Figure 3-12) appears on the taskbar near the clock.

To close the Configuration Utility, right-click its icon, and select **Exit**.

1. Turn on your computer.
2. With the USB cable provided, connect Wireless LAN USB Adapter to your computer. Windows automatically detects the USB device. The **Found New Hardware Wizard** dialog box similar to Figure 3-13 appears.
3. Click the **Next** button.



Figure 3-13: **Found New Hardware Wizard** dialog box

4. In the dialog box similar to Figure 3-14 appears, click the **Search for a suitable driver for your device (recommended)** option, and click the **Next** button.

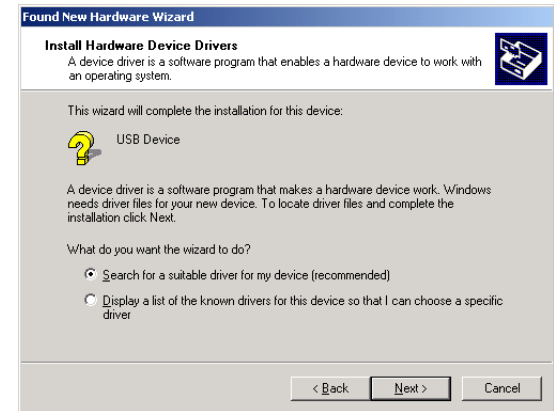


Figure 3-14: **Found New Hardware Wizard** dialog box

5. In the dialog box similar to Figure 3-15, click the **CD-ROM drives** check box to select it. Insert the installation CD into the CD-ROM drive, and click the **Next** button.

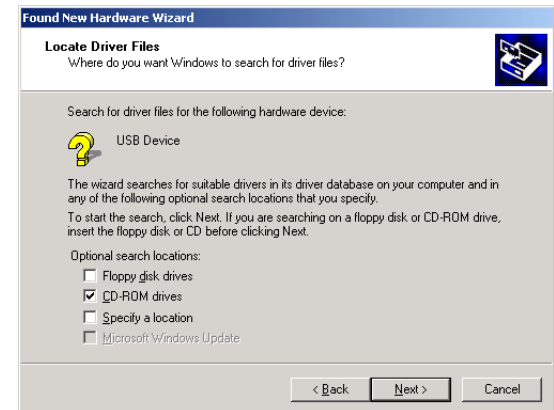


Figure 3-15: **Found New Hardware Wizard** dialog box

6. In the dialog box similar to Figure 3-16, click the **Next** button.

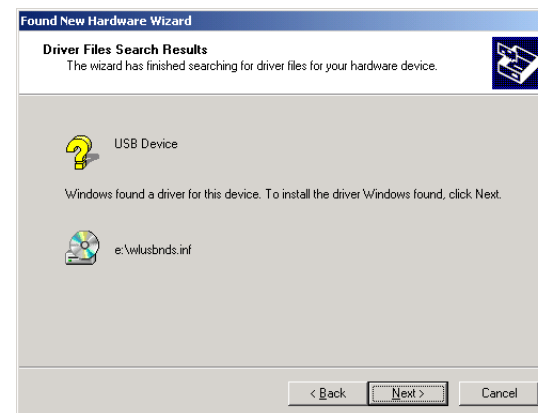


Figure 3-16: **Found New Hardware Wizard** dialog box

7. If the dialog box similar to Figure 3-17 appears, click the **Yes** button.

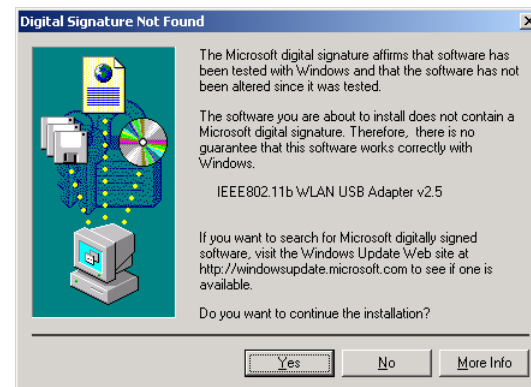


Figure 3-17: **Digital Signature Not Found** dialog box



8. In the dialog box similar to Figure 3-18, click the **Finish** button.

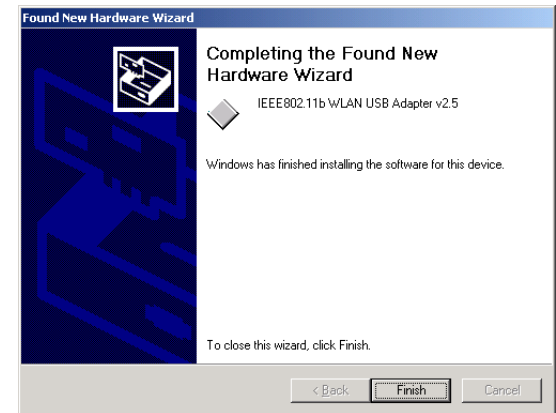


Figure 3-18: **Found New Hardware Wizard** dialog box

9. In the **Network Blaster 2030-01 Setup** dialog box similar to Figure 3-19, click the **Next** button.

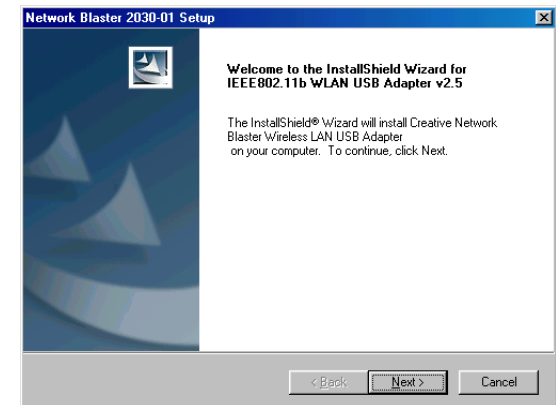


Figure 3-19: **Network Blaster 2030-01 Setup** dialog box

10. When the dialog box similar to Figure 3-20 appears, click the **Next** button.

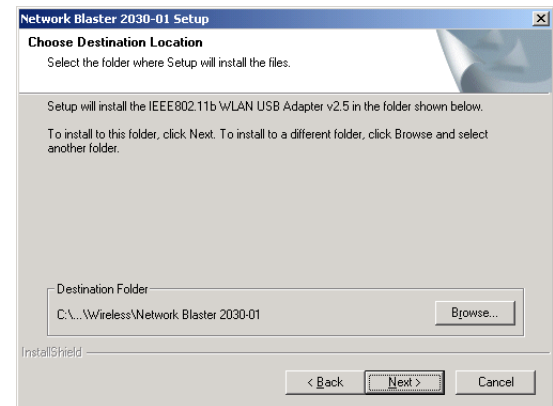


Figure 3-20: **Network Blaster 2030-01 Setup** dialog box

11. When the dialog box similar to Figure 3-21 appears, click the **Next** button.

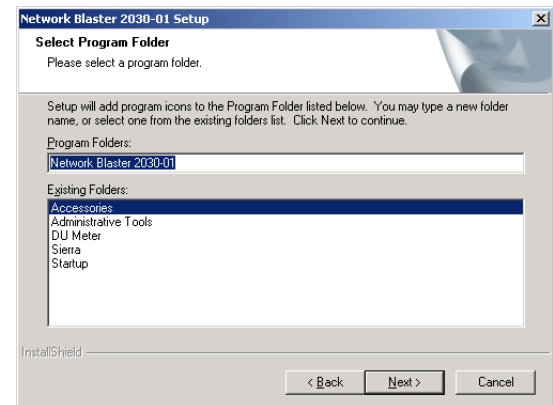


Figure 3-21: **Network Blaster 2030-01 Setup** dialog box

12. When the dialog box similar to Figure 3-22 appears, click the **Next** button.

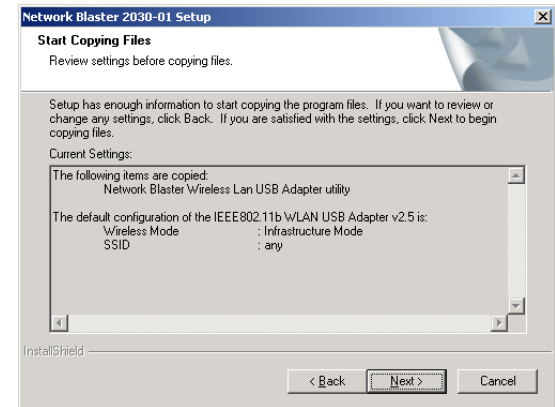


Figure 3-22: **Network Blaster 2030-01 Setup** dialog box

13. When the dialog box similar to Figure 3-23 appears, click the **Finish** button.

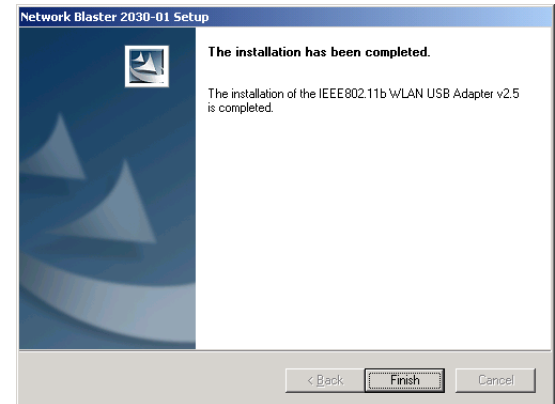


Figure 3-23: **Network Blaster 2030-01 Setup** dialog box



After you have installed the Wireless LAN USB Adapter's drivers, you must configure the Wireless LAN USB Adapter's settings. See "Configuring the Wireless LAN USB Adapter" on page 4-1.

Congratulations! You have successfully installed the Wireless LAN USB Adapter's drivers and Configuration Utility. The **Configuration Utility** icon (see Figure 3-24) appears on the taskbar near the clock.

To close Configuration Utility, right-click its icon, and select **Exit**.



Figure 3-24: **Configuration Utility** icon

In Windows Me

1. Turn on your computer.
2. With the USB cable provided, connect Wireless LAN USB Adapter to your computer. Windows automatically detects the USB device. The **Add New Hardware Wizard** dialog box similar to Figure 3-25 appears.
3. Click the **Automatic search for a better driver (Recommended)** option. Insert the installation CD into the CD-ROM drive, and click the **Next** button.

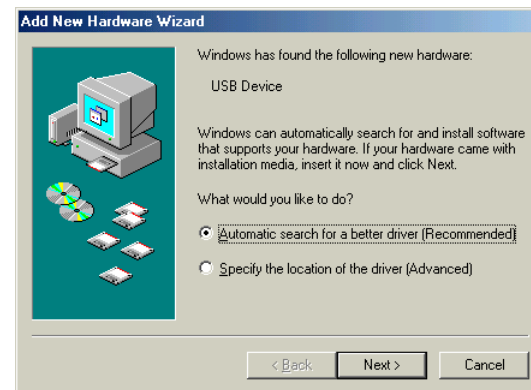


Figure 3-25: Add New Hardware Wizard dialog box

4. In the dialog box similar to Figure 3-26, click the **Finish** button.
5. When prompted, restart your computer.
Make sure the installation CD is in the CD-ROM drive.

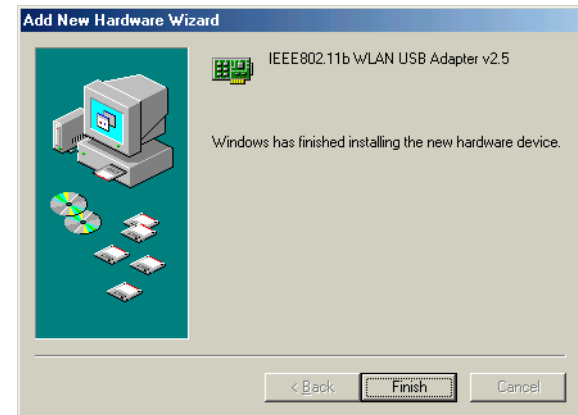


Figure 3-26: BritePort Wireless LAN USB Adapter Setup Program dialog box



If the installation CD is not inserted into the CD-ROM drive, the **Wireless Utility Setup** message appears after the system restarts. Insert the installation CD and click the **Retry** button.

6. After restarting your computer, the **Network Blaster 2030-01 Setup** dialog box similar to Figure 3-27 appears.
7. Click the **Next** button.

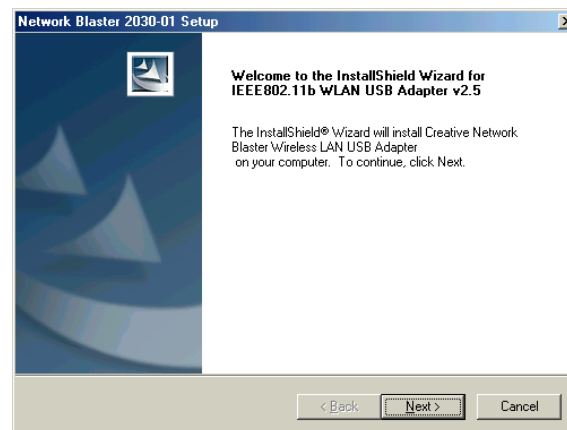


Figure 3-27: BritePort Wireless LAN USB Adapter Setup Program dialog box

8. When the dialog box similar to Figure 3-28 appears, click the **Next** button.

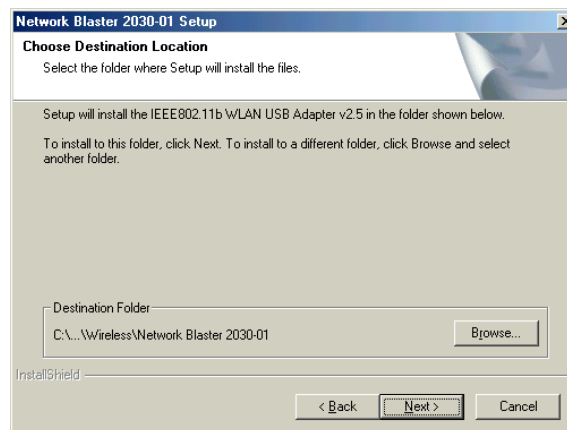


Figure 3-28: **Network Blaster 2030-01 Setup** dialog box



Wireless LAN USB Adapter

9. When the dialog box similar to Figure 3-29 appears, click the **Next** button.

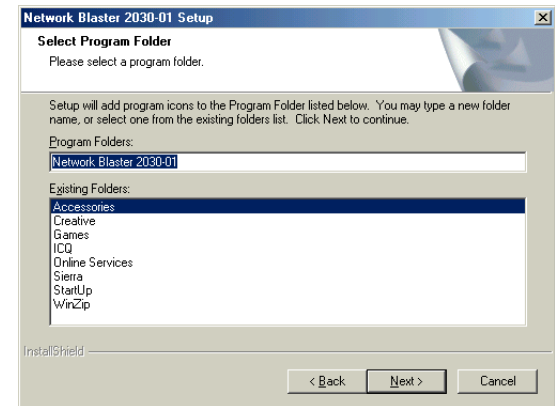


Figure 3-29: **Network Blaster 2030-01 Setup** dialog box

10. When the dialog box similar to Figure 3-30 appears, click the **Next** button.

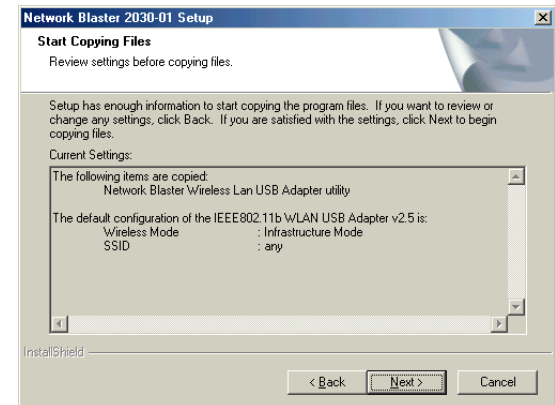


Figure 3-30: **Network Blaster 2030-01 Setup** dialog box

11. When the dialog box similar to Figure 3-31 appears, click the **Finish** button. If prompted, restart your computer.

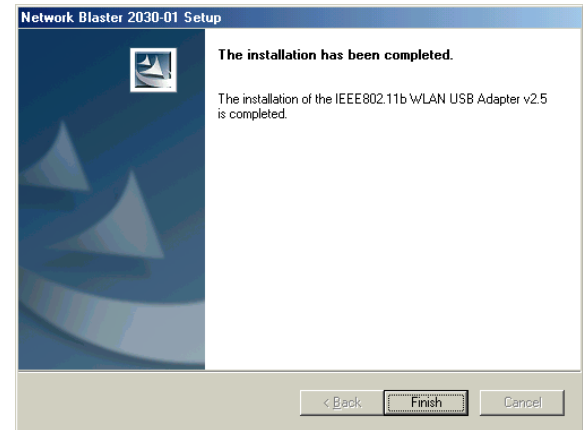


Figure 3-31: BritePort Wireless LAN USB Adapter Setup Program dialog box



After you have installed the Wireless LAN USB Adapter's drivers, you must configure the Wireless LAN USB Adapter's settings. See "Configuring the Wireless LAN USB Adapter" on page 4-1.

Congratulations! You have successfully installed the Wireless LAN USB Adapter's drivers and Configuration Utility. The **Configuration Utility** icon appears on the taskbar near the clock (see Figure 3-32). To close Configuration Utility, right-click its icon, and select **Exit**.



Figure 3-32: **Configuration Utility** icon

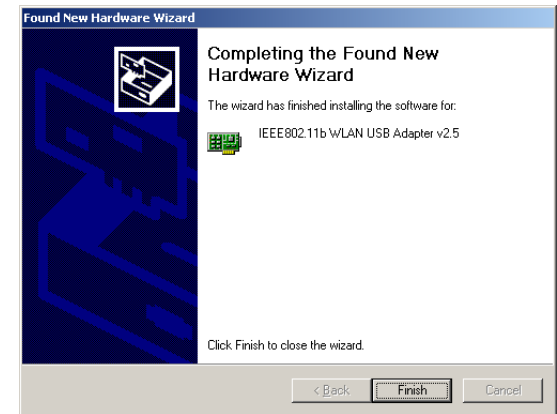
In Windows XP

1. Turn on your computer.
2. With the USB cable provided, connect Wireless LAN USB Adapter to your computer. Windows automatically detects the USB device. The **Found New Hardware Wizard** dialog box similar to Figure 3-33 appears.
3. Insert the installation CD into the CD-ROM drive, and click the **Install the software automatically (Recommended)** option.
4. Click the **Next** button.



Figure 3-33: Found New Hardware Wizard dialog box

5. In the dialog box similar to Figure 3-34, click the **Finish** button.



*Figure 3-34:***Found New Hardware Wizard** dialog box



Wireless LAN USB Adapter



If the Network Blaster 2030-01 Setup dialog box does not appear, go to the Start menu and click Run. In the Run dialog box, type in **E:**\\wlsetup.exe (where **E:** can be replaced by the actual letter assigned to your CD-ROM drive) and click the OK button.

6. In the **Network Blaster 2030-01 Setup** dialog box similar to Figure 3-35, click the **Next** button.

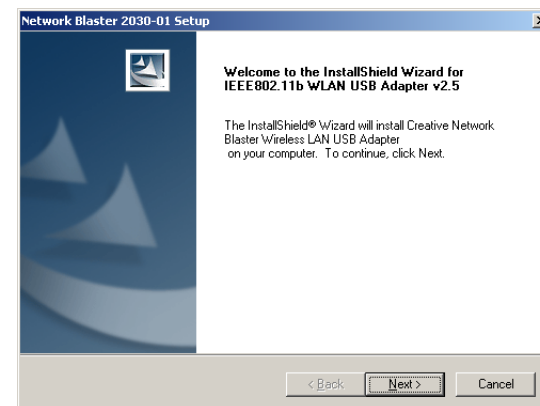


Figure 3-35: **Network Blaster 2030-01 Setup** dialog box

7. When the dialog box similar to Figure 3-36 appears, click the **Next** button.

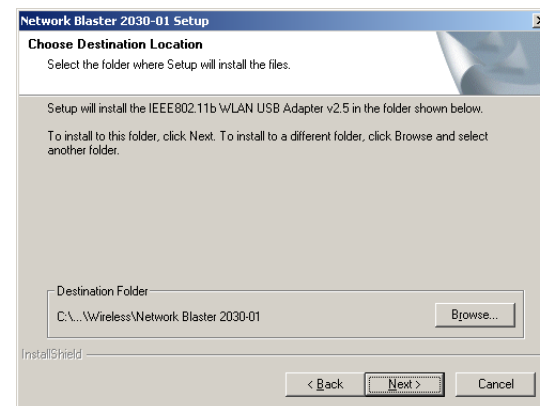


Figure 3-36: **Network Blaster 2030-01 Setup** dialog box

8. After the dialog box similar to Figure 3-37 appears, click the **Next** button.

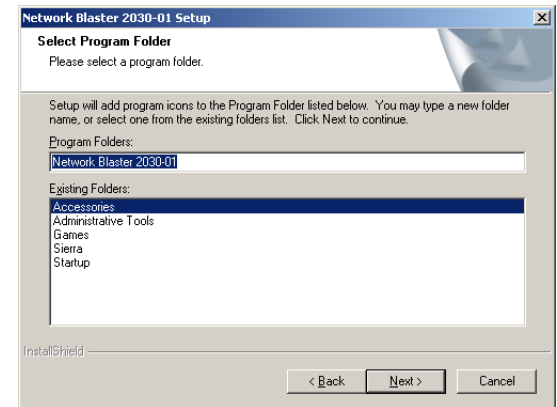


Figure 3-37: Network Blaster 2030-01 Setup dialog box

9. When the dialog box similar to Figure 3-38 appears, click the **Next** button.

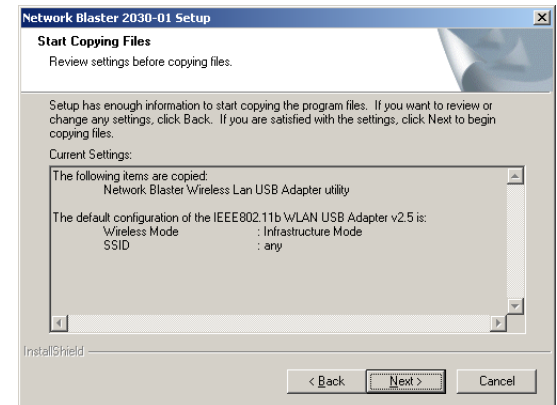
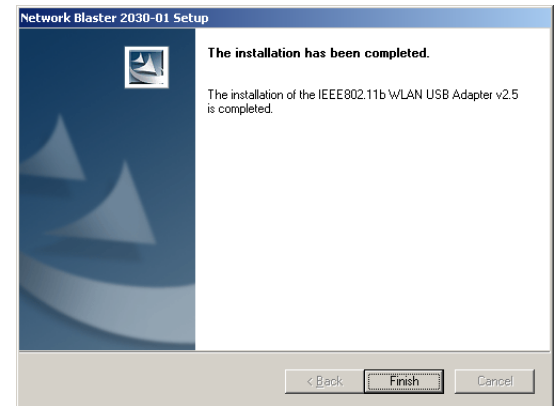


Figure 3-38: Network Blaster 2030-01 Setup dialog box

10. When the dialog box similar to Figure 3-39 appears, click the **Finish** button.



*Figure 3-39: **Network Blaster 2030-01 Setup** dialog box*



Figure 3-40: **Configuration Utility** icon



After you have installed the Wireless LAN USB Adapter's drivers, you must configure the Wireless LAN USB Adapter's settings. See "Configuring the Wireless LAN USB Adapter" on page 4-1.

Congratulations! You have successfully installed the Wireless LAN USB Adapter's drivers and Configuration Utility. The **Configuration Utility** icon (see Figure 3-40) appears on the taskbar near the clock.

To close Configuration Utility, right-click its icon, and select **Exit**.



Uninstalling Drivers and Configuration Utility

At times, you may need to uninstall, and then reinstall the drivers to correct problems, or make version upgrades. The following instructions tell you how to uninstall the applications in all Windows operating systems:

1. Close all applications.
2. Click **Start** -> **Programs** (or **All Programs**) -> **Network Blaster 2030-01** -> **Uninstall**.

The **Confirmation Uninstallation** dialog box appears.

3. Click the **OK** button.
If the **Shared File Detected** dialog boxes appear, click the **No** button.
4. If prompted, restart your computer.

Network

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Wireless LAN USB Adapter

4

Configuring the Wireless LAN USB Adapter

Configuring the Wireless LAN USB Adapter



Refer to the [Glossary](#) chapter for definitions of technical terms.

Before you use the Creative Network Blaster Wireless LAN USB Adapter 2030, you may want to configure the card in the Configuration Utility.

If you want to use your computer in Peer-to-Peer network or **Ad-hoc** mode, all the wireless stations must have the same settings for Service Set Identifier (SSID), channel, and Wired Equivalent Privacy (WEP) if any. For more information, see “Ad-hoc mode” on page 1-2.

In the **Infrastructure** mode, the wireless stations and the Access Point must have the same settings for SSID and WEP (if any). For more information, see “Infrastructure mode” on page 1-2.

Configuration Utility Icon

The **Configuration Utility** icon (Figure 4-1) appears on your computer taskbar after you have installed the drivers and Configuration Utility. It does not appear if the Wireless LAN USB Adapter is not connected to your computer.



Figure 4-1: **Configuration Utility** icon

The color of the Configuration Utility icon tells you the status of the Wireless LAN USB Adapter:

Green: In the **Infrastructure** mode, you are connected to an access point and the radio frequency (RF) signal strength is good. However, this does not ensure that your computer will be able to communicate with the access point.

In the **Ad-hoc** mode, the icon is always green, except while scanning the network.

Yellow: You are connected to an access point and the signal strength is poor.

Red: In **Infrastructure** or **Ad-hoc** mode, you are scanning the network.

Configuring Settings



The Link Quality and Signal Strength information appear only in the default **Infrastructure** mode, and not in **Ad-hoc** mode.

1. If the **Configuration Utility** icon does not appear on the taskbar, click **Start -> Programs (or All Programs)-> Network Blaster 2030-01 -> Network Blaster Wireless LAN USB Adapter utility**.
2. Double-click the **Configuration Utility** icon on the taskbar just near the clock (see Figure 4-1). The **Configuration Utility** dialog box similar to Figure 4-2 appears.
3. Click the **Link Info** tab. The status of your wireless connection is displayed.
4. Click the **Re-Scan** button to locate and re-connect the network.

State box

Displays the MAC Address of the network device which is currently connected to your Wireless LAN USB adapter.

Current Channel box

Displays the channel that the Wireless LAN USB Adapter is operating in.

Current Service Set Identifier box

Displays the SSID of the connected network device

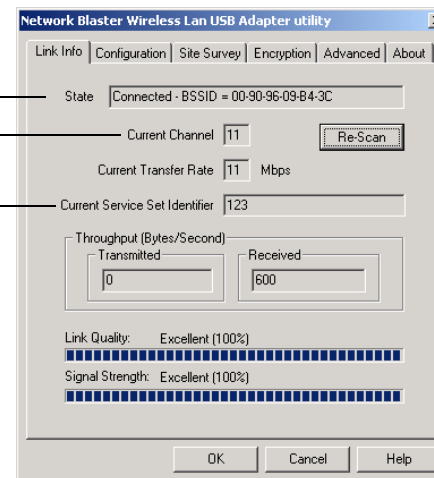


Figure 4-2: **Link Info** tab

Configuration Settings



A profile is a set of pre-defined values.



Service Set Identifier (SSID) is case sensitive.

1. Click the **Configuration** tab (see Figure 4-3). In this tab, you can change the default configuration settings below.
2. To create a new profile, click the **Profile** box, and then type a name in the box.
3. Click the **Create** button.
4. To switch between profiles, click the **Profile** box, and then click the profile that you want.
5. Click the **Activate** button.
6. To remove a profile, click the **Profile** box, and then click the profile that you want.
7. Click the **Remove** button.
8. Click the **Operating Mode** box.
If you are connecting to a network through an access point, click **Infrastructure**.
If you are connecting to a network without an access point, click **Ad-hoc**.
9. Click the **Service Set Identifier (SSID)** box.
In Infrastructure mode, set the SSID to the SSID of the access point.
In Ad-hoc mode, set the SSID to the SSID of the Ad-hoc station you want to connect.
10. Click the **Transfer Rate** box, and then click the transfer rate that you want.
11. Click the **Channel** box.
In Infrastructure mode, you need not set the channel. The channel for the access point is already set for you.
In Ad-hoc mode, set the channel to the channel of the Ad-hoc station you want to connect.

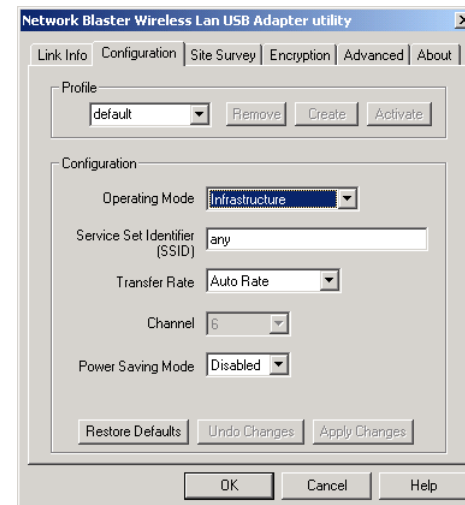


Figure 4-3: **Configuration** tab

12. To set the Wireless LAN USB Adapter to power saving mode, click the **Power Saving Mode** box, and then click **Enabled**.

In Ad-hoc mode, the Power Saving Mode is not supported.

13. Click the **Apply Changes** button to save the settings.

Site Survey Settings



The entries in the **Link Info** tab is automatically updated to reflect the selected Access Point or ad-hoc station.

1. Click the **Site Survey** tab (see Figure 4-4).
2. Click the **Search** button to display or refresh the list of available Access Points or ad-hoc stations.
3. Click the Access Point or a wireless network device you want to link with.
4. Click the **Connect** button.
Your computer automatically connects to the selected Access Point or wireless network device.

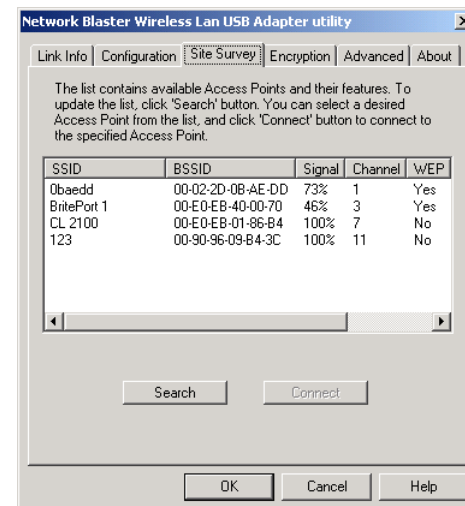


Figure 4-4: **Site Survey** tab

Encryption Settings



- For **Wired Equivalent Privacy (WEP)** you have three options: **Disabled**, **64 Bits**, and **128 Bits**. All wireless network devices in a Local Area Network (LAN) must have the same WEP settings and WEP key entry for this feature to work. If WEP is disabled, the data is not encrypted before being transmitted. To enable encryption, you must select either 64 Bits or 128 Bits.
- The type of Encryption option to use depends on your Access Point encryption settings.
- Use "0"s for unused keys.

1. Click the **Encryption** tab (see Figure 4-5). To enable WEP, click the **Encryption (WEP)** box, and then click the number of bits that you want.
2. The type of encryption option depends on your access point encryption settings. If you want to create a WEP key entry using a passphrase, click the **Create with Passphrase** option, and then type a series of alphanumeric characters in the **Passphrase** box. A series of hexadecimal values will be created automatically.
3. If you want to create a WEP key entry manually, click the **Manual Entry** option. By default, hexadecimal values are used. For more information, see "Hexadecimal" on page D-4.
4. If you want to use ASCII code for the encryption keys, click the **ASCII** check box to select it, and then complete the key table with random ASCII characters. Initially, you may need to fill in all the key entries. These keys serve as passwords that encrypt your data before transmission.
5. Click the **Default Tx Key** box, and then click the key that you want to use to encrypt your data with.
6. Click the **Apply Changes** button to save the settings.

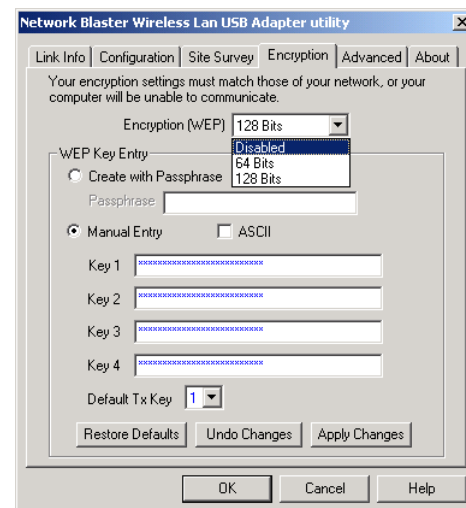


Figure 4-5: **Encryption** tab

Advanced Settings



You are advised to use the manufacturer's default values. If you have changed the original settings, and would like to return to the default settings, click the **Restore Defaults** button.

1. Click the **Advanced** tab (see Figure 4-6).
2. Click and drag the **Fragmentation Threshold** and **RTS/CTS Threshold** sliders to the rate you want.
3. The **Security** box will only be highlighted when WEP is enabled. Click the **Authentication Type** box, and then click the option that matches your access point.
4. Click the **Preamble Type** box, and then click the preamble type that you want.
5. Click the **Apply Changes** button to save the settings.

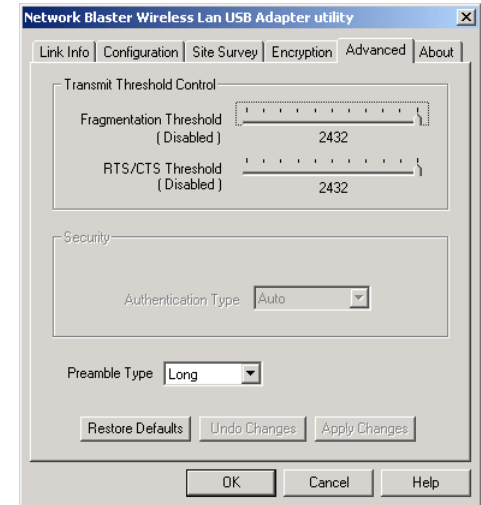


Figure 4-6: **Advanced** tab

Utility Information

1. Click the **About** tab (see Figure 4-7). This displays the driver, configuration utility and firmware versions.
2. Click the **OK** button.

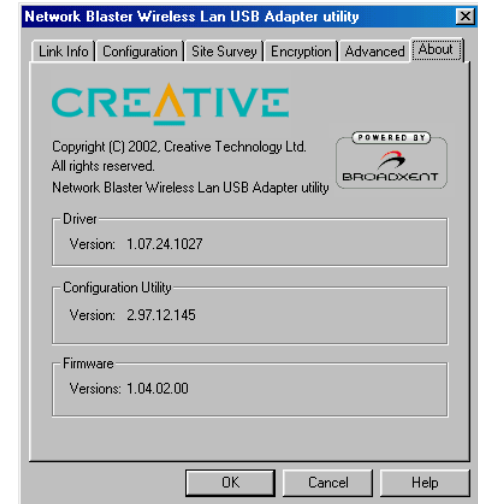


Figure 4-7: **About** tab

Configuring Settings In Windows XP

You can choose to configure your Wireless LAN USB Adapter using the Wireless Network Connection in Windows XP, or the Configuration Utility provided in the installation CD.

To configure your Wireless LAN USB Adapter using the Wireless Network Connection, go to “Using the Wireless Network Connection” on page 4-8.

To configure your Wireless LAN USB Adapter using the Configuration Utility, go to “Using the Configuration Utility” on page 4-12.

Using the Wireless Network Connection

1. After you install the drivers, the **Wireless Network Connection** icon appears on the taskbar.
2. Right-click the **Wireless Network Connection** icon (Figure 4-8) on the taskbar, and then click **View Available Wireless Networks**.
3. When the **Connect to Wireless Network** dialog box similar to Figure 4-9 appears, click the available network that you want. If necessary, enter the WEP key in the **Network key** field.
4. Click the **Connect** button. Your computer automatically connects to the selected network.



Figure 4-8

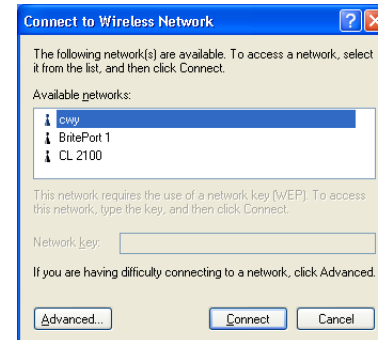


Figure 4-9: **Connect to Wireless Network** dialog box

Encryption settings



If you cannot find your Access Point, click the **Refresh** button.

1. Right-click the **Wireless Network Configuration** icon on the taskbar, and then click **View Available Networks**.
2. When the **Connect to Wireless Network** dialog box similar to Figure 4-9 appears, click the **Advanced** button.
3. A **Wireless Network Connection Properties** dialog box similar to Figure 4-10 will pop up. If your Access Point or ad-hoc server appears in the Preferred Networks section, click on it and click the Properties button.

If your Access Point or ad-hoc server does not appear in the Preferred networks section, then click the **Refresh** button, then click the network that you want from the list of available networks, then click the **Configure** button.

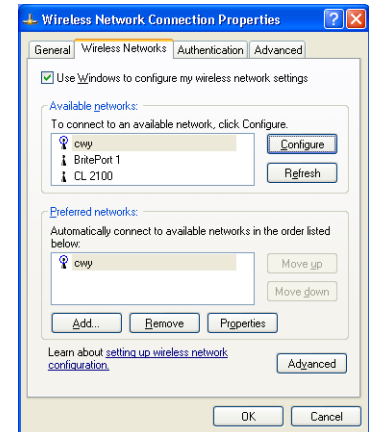


Figure 4-10: **Wireless Network Connection Properties** dialog box



- For **Wired Equivalent Privacy (WEP)** you have three options: **Disabled**, **64 Bits (40-bits)**, and **128 Bits (104 bits)**. All wireless network devices in a Local Area Network (LAN) must have the same WEP settings and WEP key entry for this feature to work. If WEP is disabled, the data is not encrypted before being transmitted. For enabling encryption, you must select either 64 Bits or 128 Bits.
- The type of Encryption option to use depends on your Access Point encryption settings.

4. When the **Wireless Network Properties** dialog box similar to Figure 4-11 appears, click the **Data Encryption (WEP enabled)** check box to select it.
5. Click the **The key is provided for me automatically** check box to deselect it.
6. Complete the **Network key** box with random hexadecimal values or ASCII characters. These keys serve as passwords that encrypt your data before transmission.
7. Click the **OK** button.

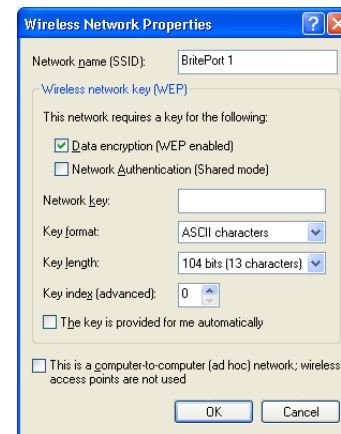


Figure 4-11: **Wireless Network Properties** dialog box

Network Status



The Wireless Network Connection status dialog box will not appear if the Wireless LAN USB adapter is not currently connected to a wireless network.

1. Double-click the **Wireless Network Connection** icon on the taskbar.
2. When the **Wireless Network Connection Status** dialog box similar to Figure 4-12 appears, click the **General** tab. This displays the connection status, duration, speed and signal strength.

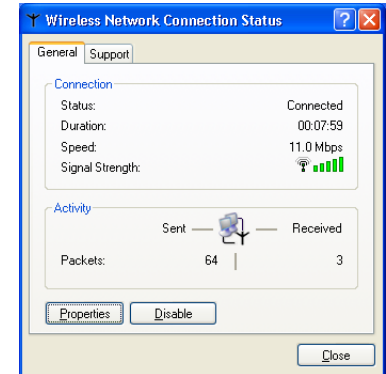


Figure 4-12: **Wireless Network Connection Status** dialog box

3. Click the **Support** tab. A dialog box similar to Figure 4-13 that displays the address type, IP address, subnet mask and default gateway appears.

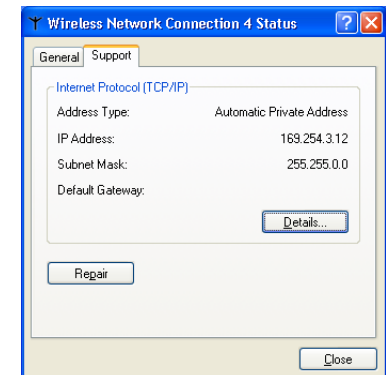


Figure 4-13: **Wireless Network Connection Status** dialog box

Using the Configuration Utility



When Wireless Network Connection is enabled, you cannot use the Configuration Utility to configure the settings. Therefore, the Wireless Network Connection needs to be disabled.

1. Right-click the **Configuration Utility** icon (Figure 4-1) on the taskbar, and then click **Exit**.
2. Right-click the **Wireless Network Connection** icon (Figure 4-8) on the taskbar, and then click **View Available Wireless Networks**.
3. When the **Connect to Wireless Network** dialog box similar to Figure 4-9 appears, click the **Advanced** button.
4. When the **Wireless Network Connection Properties** dialog box similar to Figure 4-10 appears, click the **Use Windows to configure my wireless network settings** check box to *clear* it. If you want to use the Wireless Network Connection later, be sure to click this check box to select it.
5. Click the **OK** button.

For the remaining steps, refer to "Configuring Settings" on page 4-2.

Notes on Wireless LAN Configuration

When configuring a wireless LAN (WLAN), take note of the following points:

- ❑ Start by determining the areas to be networked, the number of users and the type of devices to be used. Then determine the number of Access Points required and where they should be placed.
- ❑ An Access Point provides a data rate of up to 11 Mbps, which is shared by all wireless clients in the area covered by the Access Point. If two Access Points are placed close to each other, they can simultaneously provide a data rate of up to 22 Mbps. However, they must operate in non-overlapping channels. Two Access Points placed close to each other and operating on the same channel can provide only one 11 Mbps per channel.
- ❑ Optimize the performance of the WLAN by ensuring that the distance between two Access Points is not too large. In most buildings, WLAN cards operate within a range of 100 to 300 feet (30 to 91 meters), depending on the thickness and structure of the walls. Under normal conditions, an Access Point provides a coverage of up to 150 feet (46 meters). However, in offices with walls or cube walls, the coverage is only around 80 feet (24 meters).
- ❑ Radio waves can pass through walls and glass but not metal. If the signal on the other side of a wall is weak, it may be that the wall has reinforcing metal in its structure. Install another Access Point to circumvent this problem or move the Access Point to another location.
- ❑ Floors usually have metal girders and metal reinforcing struts that weaken radio waves.

Network

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Wireless LAN Access Point

5

Configuring Your Computer's Network Settings

Configuring Your Computer's Network Settings

This chapter explains how to configure your computer's network settings in Windows 98 SE, Windows Me, Windows 2000 and Windows XP.

Before you begin to configure a computer, be sure that the computer has a functioning Network Interface Card (NIC). If your computer is a wireless client of the Wireless LAN Access Point 2100, the Wireless LAN USB Adapter 2030 is your NIC.

Network Configuration in Windows 98 SE/ Me

1. **Start -> Settings -> Control Panel.**
2. Double-click the **Network** icon.
3. When the dialog box similar to Figure 5-1 appears, click the **Configuration** tab.
4. Click your Ethernet card to highlight it, for example, **TCP/IP->PRO/100+ Management Adapter (10/100)** and then click the **Properties** button.

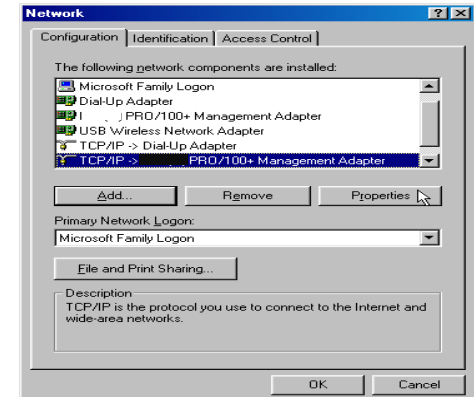


Figure 5-1

5. When the dialog box similar to Figure 5-2 appears, click the **IP Address** tab. If you are using a Dynamic IP address, proceed to step 6. For users with a Static IP address, go to step 8.
6. Click the **Obtain an IP address automatically** option to select it and click the **OK** button.
7. Click the **OK** button.
8. When Windows prompts you to restart your computer, click the **Yes** button to restart your computer. This completes the Ethernet configuration, therefore skip the remaining steps.
9. Click the **Specify an IP Address** option to select it.
10. Type the relevant information in the **IP Address** and **Subnet Mask** boxes, and then click the **Gateway** tab.
11. When the dialog box similar to Figure 5-3 appears, type the new gateway address in the **New gateway** box, and then click the **Add** button.
12. Click the **DNS Configuration** tab

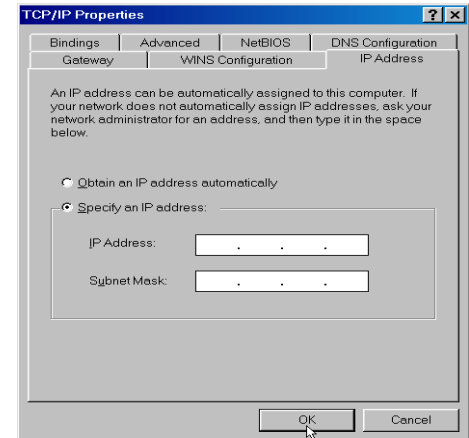


Figure 5-2

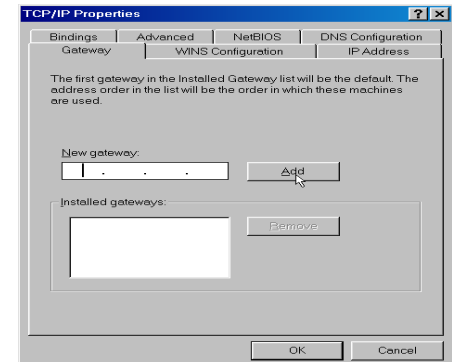


Figure 5-3

13. When the dialog box similar to Figure 5-4 appears, click the **Enable DNS** option to select it.
14. Type the relevant information in the **Host**, **Domain** and **DNS Server Search Order** boxes and then click the **Add** button.
15. Click the **OK** button.
16. Click the **OK** button.
17. When Windows prompts you to restart your computer, click the **Yes** button to allow the settings to take effect and complete your configuration.

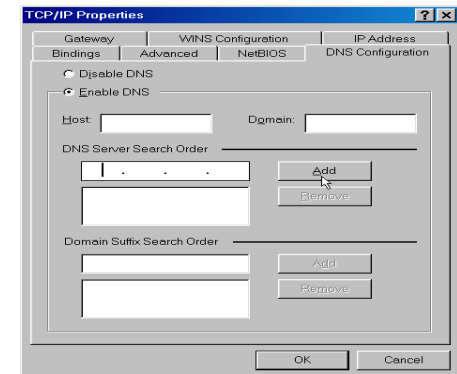


Figure 5-4

Network Configuration in Windows 2000

1. **Start -> Settings -> Control Panel.**
2. Double-click the **Network** icon.
3. Right-click the **Local Area Connection** icon and then click **Properties** from the list to select it.
4. When the dialog box similar to Figure 5-5 appears, select **Internet Protocol (TCP/IP)** and then click the **Properties** button.

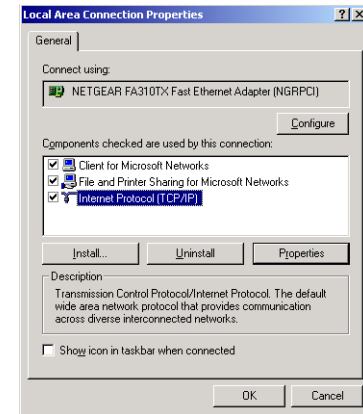


Figure 5-5

5. When the dialog box similar to Figure 5-6 appears, click the **Obtain an IP address automatically** option and proceed to step 7. If you are using a Dynamic IP Address. Continue with step 6 if you are using a static IP address.
6. Click the **Use the following IP Address** option to select it and type the relevant information in the **IP Address**, **Subnet mask**, **Default gateway**, **Preferred DNS server** and **Alternate DNS server** boxes.
7. Click the **OK** button.
8. When the **Local Area Connection Properties** dialog box appears, click the **OK** button to complete the configuration.

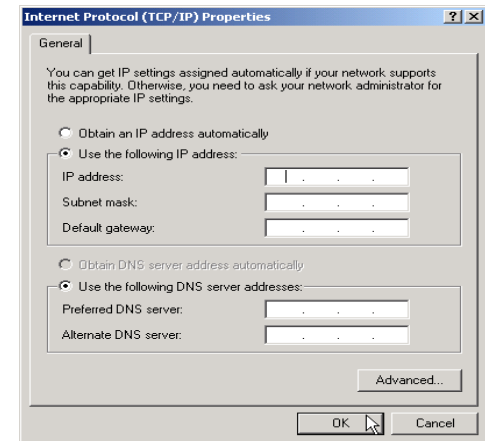


Figure 5-6

Network Configuration in Windows XP

1. **Start -> Control Panel.**
2. Double-click the **Network Connections** icon.
3. Right-click the **Local Area Connection** icon and then click **Properties** from the list to select it.
4. When the dialog box similar to Figure 5-7 appears, select **Internet Protocol (TCP/IP)** and then click the **Properties** button.

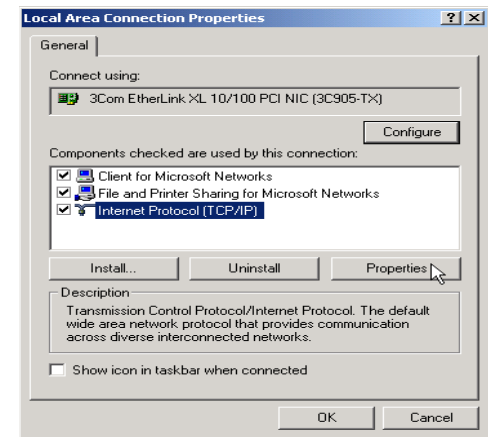


Figure 5-7

5. When the dialog box similar to Figure 5-8 appears, click the **Obtain an IP address automatically** option and proceed to step 7 If you are using a Dynamic IP Address. Continue with step 6 if you are using a static IP address.
6. Click the **Use the following IP Address** option to select it and type the relevant information in the **IP Address, Subnet mask, Default gateway, Preferred DNS server** and **Alternate DNS server** boxes.
7. Click the **OK** button.
8. When the **Local Area Connection Properties** dialog box appears, click the **OK** button to complete the configuration.

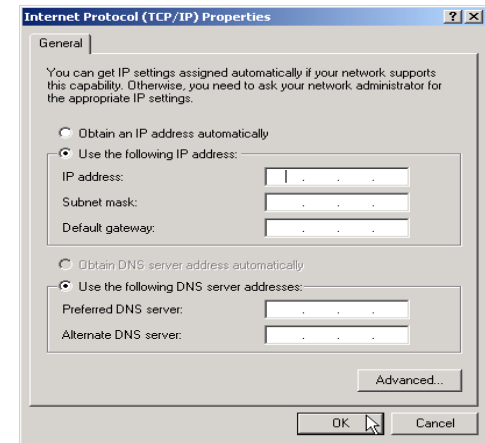


Figure 5-8



A

General Specifications

Specifications

This appendix lists the general specifications of your wireless LAN USB adapter.

Wireless Interface	<ul style="list-style-type: none"><input type="checkbox"/> IEEE 802.11b compliant<input type="checkbox"/> WEP security support (64-bit or 128-bit encryption)
USB Interface	<ul style="list-style-type: none"><input type="checkbox"/> Compliant to 1.0 and 1.1 standards
Antenna	<ul style="list-style-type: none"><input type="checkbox"/> Built-in antenna
Frequency Range	<ul style="list-style-type: none"><input type="checkbox"/> 2.4 - 2.4835 GHz (ISM Band)
Modulation	<ul style="list-style-type: none"><input type="checkbox"/> DSSS - Direct Sequence Spread Spectrum
Channels	<ul style="list-style-type: none"><input type="checkbox"/> 11 Channels
Data Rate	<ul style="list-style-type: none"><input type="checkbox"/> 11/5.5/2/1 Mbps
Output Power	<ul style="list-style-type: none"><input type="checkbox"/> 15 dBm (typical)
Coverage Area (outdoor)	<ul style="list-style-type: none"><input type="checkbox"/> Up to 390 meters (1287 feet)
Power Supply	<ul style="list-style-type: none"><input type="checkbox"/> Derives power from the USB bus



Indicator LEDs	<ul style="list-style-type: none">❑ Power LED❑ Link LED
Safety and Regulatory	<ul style="list-style-type: none">❑ FCC Part 15 Class B, CE
Physical Dimensions	<ul style="list-style-type: none">❑ 4.6 inches (117 mm) x 2.1 inches (82 mm) x 1.0 inches (26 mm)
Weight	<ul style="list-style-type: none">❑ 4.2 oz (120 g)



B Troubleshooting

Troubleshooting

This appendix provides tips and solutions for resolving some of the problems you might encounter with the Creative Network Blaster Wireless LAN USB Adapter 2030 either during installation or normal use.

Problems with Wireless LAN USB Adapter

In Windows 98SE/Me/2000

Windows does not auto-detect the new USB device and the Add New Hardware Wizard dialog box does not appear.

To solve this problem, refer to the following section that corresponds to your Windows operating system.

1. Right-click the **My Computer** icon on your desktop and select **Properties**.
2. Click the **Device Manager** tab.
3. Click the **View devices by type** option and scroll down. Be sure that you see **Universal Serial Bus controllers**. If it's not there, refer to your motherboard user guide and be sure that your motherboard supports USB.
4. Expand **Universal Serial Bus controllers** by clicking the plus sign next to it and you will see the name of the controller bus and USB Root Hub. Be sure that there is no red "X" or yellow "!" next to them. The red "X" or yellow "!" signs indicates incorrect or incomplete installation.
5. Click the **Remove** button to remove the items with the red "X" or yellow "!"
6. Reinstall the drivers for Wireless LAN USB Adapter. For more information, see "Installing and Uninstalling Drivers and Configuration Utility" on page 3-1.

In Windows XP

1. Click **Start** -> **Control Panel**.
2. Double-click the **System** icon. The **System Properties** dialog box appears.
3. Click the **Hardware** tab.
4. Click the **Device Manager** button.
5. Click the plus sign next to **Universal Serial Bus controllers**. The name of the controller bus appears. Be sure that there is no red "X" or yellow "!" next to it. The red "X" or yellow "!" signs indicates incorrect or incomplete installation.
6. Click any items with the red "X" or yellow "!", and then click the **Remove** button.
7. Reinstall the drivers for Wireless LAN USB Adapter. For more information, see "Installing and Uninstalling Drivers and Configuration Utility" on page 3-1.

Problems with Software

The Configuration Utility icon on the status bar is always red.

Do the following:

- ☐ If you are in Infrastructure mode, be sure that your computer and the access point have the same SSID and WEP settings. The SSID is case sensitive. See "Configuring Settings" on page 4-2.
- ☐ If you are in Ad-hoc mode, be sure that all the wireless stations use the same SSID, channel, and WEP settings.
- ☐ Make sure that all the wireless stations are within range of each other.
- ☐ Restart the access point.
- ☐ Restart your computer.
- ☐ In the **Advanced** tab (see "Advanced Settings" on page 4-6), make sure that **Shared** or **Auto** is selected in the **Authentication Type** box.

My computer is unable to establish a link with an access point.

Do the following:

- ☐ Make sure that the access point is connected and turned on. Observe the status LEDs to make sure that the access point is properly connected.
- ☐ Make sure that your PC (wireless client) is set to Infrastructure mode.
- ☐ Make sure that the wireless USB adapter is connected to your computer. Also make sure that you have installed the driver properly.
- ☐ Make sure that your computer is configured with the same SSID as the Wireless Access Point. Also remember that the SSID is case sensitive.
- ☐ Your computer and the Access Point must have the same settings for WEP (Wired Equivalent Privacy). If WEP is disabled on the Access Point, it must be disabled on the computer. If WEP is enabled, the key tables must match.
- ☐ The authentication type and the Access Point must have the same settings or make sure that **Auto** is selected in the **Authentication Type** box (see "Advanced Settings" on page 4-6).
- ☐ Reset the Access Point.
- ☐ Restart your computer.

My computer is unable to connect to another wireless client.

Do the following:

- ☐ Make sure that the SSID is same for all the wireless clients and the Access Point.
- ☐ Check if you have a valid IP address and Subnet Mask. To find this out:

In Windows 98 SE/Me

1. Click the **Start** button and click **Run**. The **Run** dialog box appears.
2. In the **Open** box, type **winipcfg**.
3. Click the **OK** button. Circle the pull down list to select the specified device.
4. Restart your computer

In Windows 2000/XP

1. Click the **Start** button and click **Run**. The **Run** dialog box appears.
2. In the **Open** box, type **command**.
3. At the command prompt, type **ipconfig**.
4. Press the **Enter** key.
5. Restart your computer.

Radio Interference.

Do the following:

- ☐ Adjust the antennas of the wireless access point until you get the best reception.
- ☐ Keep the access point and wireless clients away from microwave ovens, large metal objects and 2.4 GHz cordless phones.
- ☐ If possible move the access point from its present location to another location until you get the best reception.

If the Network
Blaster 2030-01
Setup dialog box
does not appear

Do the following:

- ☐ Go to the Start menu
- ☐ Click on the Run command
- ☐ Type in E:\wlsetup.exe (where E: can be replaced by the actual drive letter assigned to your CD-ROM) in the prompt.
- ☐ Click the OK button.



C

Frequently Asked Questions (FAQs)

Frequently Asked Questions (FAQs)

This appendix provides frequently asked questions you might have about Creative Network Blaster Wireless LAN USB Adapter 2030 either during installation or normal use.

What is the function of the Creative Network Blaster Wireless LAN USB Adapter?

It is a wireless network adapter card. Connect the wireless LAN USB adapter to your computer, and the computer becomes a wireless station, which can transmit and receive radio frequency (RF) signals. It can now communicate with other wireless stations. Your computer can also be connected to a wired local network through an Access Point and share network resources.

What is a wireless LAN?

A wireless LAN links the network users to LAN services through radio frequency waves (RF) or wireless connection. In most companies, it is an extension of a wired network, however in many small offices or hard-to-wire areas; it may be the only LAN solution. A wireless LAN allows workers to roam freely around a floor area, building, or multiple buildings, and still remain continuously connected to the network.

How do I physically connect the Creative Network Blaster Wireless LAN USB Adapter to my computer?

Connecting the Adapter to a computer is very easy. The Adapter has a USB port. Connect the supplied USB cable to the USB port of the Adapter, and connect the other end of the USB cable to a USB port on the computer. Windows operating system will automatically detect the new hardware device and you will be required to load the driver software from the Adapter's CD-ROM.

What is a Wireless Access Point?

Wireless Access Point (AP) is a network bridge that provides an easy and quick solution for the wireless stations to access an existing wired local area network. An Access Point extends the reach and usefulness of the wired network resources. When you connect a Wireless AP to an Ethernet port of a hub or switch on your wired LAN, many wireless clients can also access the network resources. Radio frequency (RF) waves link the wireless clients to an AP, and the AP works as a bridge between the wireless clients and the wired LAN or Ethernet clients.

What devices will cause interference with a wireless LAN?

A wireless LAN compliant to IEEE 802.11b operates in the 2.4 GHz frequency band. Other products that operate in this frequency band, such as microwave ovens and 2.4 GHz cordless phones, can cause interference.

What are DSSS and FHSS?

DSSS and FHSS are two different digital modulation techniques that use spread spectrum transmission methods. With FHSS, the data rates are limited to 2 Mbps, while DSSS provides data rates up to 11 Mbps. In DSSS, the large bandwidth is effectively split into frequency channels and the signal is then spread across the channels in a predetermined pseudo random sequence. In DSSS, the digital data is encoded with a series of codes.

How secure is my wireless connection?

Wireless Access Point and clients that adhere to 802.11b standard use DSSS (Direct Sequence Spread Spectrum) technology. This technology has an inherent security feature called scrambling, which makes it difficult for an intruder to intercept and decipher the encoded wireless data. For enhanced security, your wireless network must use a unique SSID. You can also enable the WEP function so that the data is encrypted before being transmitted.



Windows 2000 and Windows Me have a few security features. Windows 98SE users can download security related patches from Microsoft's web site. However, it is recommended that you develop safe computing habits:

- ☐ Protect your passwords. Do not divulge the passwords to anyone and be especially careful if someone asks you for the password online or over the phone.
- ☐ Protect your online transactions by using a secure browser.
- ☐ Before typing your credit card and other important information online, make sure that the web site is secure and trustworthy.
- ☐ For computer folders that contain confidential and financial information, disable the "File Sharing" option.
- ☐ Whenever you are not using your computer for a long time, turn off your computer or disconnect the wireless LAN USB adapter.
- ☐ Use anti-virus software, as well as intrusion detection software and update it regularly.
- ☐ Do not open email attachments unless you trust the sender and his identity.
- ☐ Do not download files and software from unreliable sources.



D

Glossary

Glossary

This appendix explains the technical terms used in this manual.

Access Point	A networking device that transparently bridges wireless computers and laptops to a wired local network.
Ad-hoc mode	A small Peer-to-Peer network mode in which the wireless clients are connected to one another directly without using a Wireless Access Point. Some of the wireless clients are part of the network only for a limited duration while in some close proximity of the rest of the network. In IEEE 802.11b specification, the ad-hoc mode is referred to as the independent basic service set.
Antenna	A device that intercepts radio frequency waves from the atmosphere and converts them to corresponding voltage signals.
Bandwidth	A measure of the maximum rate of data transfer. Greater bandwidth allows the transfer of more information in a given period of time. For digital services, the bandwidth is usually expressed in bits or bytes per second.
Basic Service Set (BSS)	A group of Wireless Stations and an Access Point using the same ID (Service Set Identifier or SSID).
Binary	A number system that has only two digits 0 and 1.
Bridge	A hardware device that links two or more physical networks and manages the transfer of data between these networks. The two networks being connected can be alike or dissimilar.

Broadband	A transmission media that can handle the transmission of multiple messages, at different frequencies at one time. Broadband signals use analog carriers.
Cable modem	A modem that sends and receives digital data on the same cable that brings television broadcast signals to your home.
Channel	A channel is a separate path through which signals can flow.
Client	A computer that accesses shared network resources provided by another computer (called a server) on a local area network or the Internet.
dBm	Power level in decibels relative to 1 mW.
Domain Name System (DNS)	This system allows you to specify a symbolic name, a meaningful and easy-to-remember "handle," instead of an Internet Protocol (IP) address. The DNS is the way Internet domain names are located and translated into IP addresses.
DNS Server	A server that contains both the English and numerical addresses of all computers connected to the Internet. When you specify an e-mail or IP address using the "English" domain name, the DNS server will return the corresponding numeric address.
Domain Name	The Internet address or the URL of a web site.
Direct Sequence Spread Spectrum (DSSS)	Direct Sequence Spread Spectrum — A digital modulation technique that spreads data transmissions across the entire available frequency band in a pre-arranged scheme. Under DSSS, each bit of data to be transmitted is encoded with a redundant

pattern called a chip. The chipping code is known only to the sending and receiving stations, making it difficult for an intruder to intercept and decipher the encoded wireless data. DSSS is used in IEEE 802.11b networks.

Driver	A program that a computer uses to control the operation of a peripheral device, such as a keyboard, modem, monitor, card, or cable.
Dynamic Host Configuration Protocol (DHCP)	A method of assigning a temporary IP address to a host, such as a computer, connected on a specific network. With dynamic addressing, a particular host may have a different IP address each time it connects to the network.
Dynamic IP address	See DHCP.
Encryption	A procedure to convert a file from its original form to one that can be read only by the intended recipient.
Ethernet	A local-area network (LAN) protocol that supports data transfer rates of 10 Mbps. It is one of the most widely implemented LAN standards that operates over the twisted pair or coaxial cable. A version of Ethernet, called 100 Base-T (or fast Ethernet), supports data transfer rates of 100 Mbps.
Extended Service Set (ESS)	A group of Wireless Stations and multiple Access Points using the same ID (ESSID) form an Extended Service Set.
Extended Service Set Identifier (ESSID)	An ASCII string, up to 32 characters long, used by a wireless LAN. A wireless station with an ESSID that is different from your network's ESSID cannot connect to your network.

Fast Ethernet	An Ethernet specification with a speed of 100 Mbps (10 times faster than 10BaseT).
Firewall protection	Creative's built-in router provides firewall protection to all the computers on its LAN. All these computers share a single public IP address and are assigned local IP addresses that are hidden from the outside world. For the external world, there is no network, only a single device. The BritePort's router blocks any attempt by any external computer to connect to local resources.
Fragmentation threshold	The size at which the transmitted data packets are fragmented. The range extends from 256 to 2346 bytes.
Full duplex	Simultaneous and independent data transmission, between two communicating computers, in both directions.
Half duplex	Data transmission in which both computers can send and receive data but the data transmission can occur in only one direction at a time.
Hexadecimal	A number system with a base of 16. The 16 digits in the hexadecimal system are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d, e, f.
Hub	A device used for connecting nodes in a star topology, that is all the nodes are connected to a central hub. A <i>passive</i> hub simply organizes the wiring, while an <i>active</i> hub, besides organizing the wiring, regenerates and retransmits the signals.
IEEE 802.11	A family of wireless LAN standards — 802.11a, 802.11b, 802.11e, and 802.11g, out of which 802.11b has won widespread adoption. The original 802.11 standard was first approved in 1997 but was not very successful because it was relatively slow at 2 Mbps.

IEEE 802.11b	A high-bit wireless LAN standard that works on the 2.4 GHz band and utilizes DSSS (direct sequence spread spectrum) technology. It offers data bit rates of up to 11 Mbps and the range is from 61 to 91 meters (200 to 300 feet) for maximum speed.
Infrastructure mode	A local area network or other small network mode in which wireless clients are part of the network and use one or more Access Points to connect to a wired LAN. Each Access Point is connected to the Ethernet LAN using a standard Ethernet cable. In IEEE 802.11b specification, the infrastructure mode is referred to as the Basic Service Set.
Interface	The physical arrangement that supports the attachment of a device to a connector or to another device.
Internet Protocol (IP)	The standard protocol within TCP/IP that defines the basic unit of information by breaking down data messages into packets, routing and transporting the packets over networks, then reassembling the packets at their destination. IP corresponds to the Network layer (layer 3) in the ISP/OSI model.
IP Address	The address for a computer on a TCP/IP network. The IP address identifies a particular machine on a network. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be 0 to 255, for example, 11.160.10.240 is an IP address. Any machine connected to the Internet is assigned an IP address.
Industrial, Scientific and Medical (ISM) band	There are four unlicensed bands for wireless LANs commonly known as ISM bands. They are found on the 900 MHz, 2.4 GHz and 5 GHz (two) bands.
Local Area Network (LAN)	A computer network that spans a relatively small area. Most LANs are confined to an office, single building, or group of buildings.

Light Emitting Diode (LED)	An electric component that emits light (turns ON) when current flows through it.
Kilobits per second (Kbps)	A measure of data transfer speed.
Kilobytes (KB)	1,024 bytes.
Megabits per second (Mbps)	A measure of data transfer speed.
Megabits/Megabytes	One million bits/bytes.
Modem	A device that allows a computer to transmit data to other computers via telephone lines.
Network Address Translation (NAT)	Network Address Translation — An Internet standard that enables a local-area network to use one set of IP addresses for internal traffic and a second set of IP addresses for external traffic. NAT provides a type of firewall security by hiding internal IP addresses. Since they are used internally, such IP addresses will not be in conflict with those used by other companies and organizations.
Network Mask	See Subnet Mask.
Network Interface Card (NIC)	A card that is installed in a computer so that it can be connected to a network. The NIC manages the flow of network information to and from the computer.

Personal Computer Memory Card International Association (PCMCIA)	An industry group organized in 1989 to promote standards for a card-size memory or I/O device that would fit into a personal computer, usually a notebook or laptop computer.
PCMCIA Card	A card-size memory or I/O device that connects to a personal computer, usually a notebook or laptop computer. A PCMCIA card has a 68-pin connector that connects into a slot in the computer.
Packet Internet Groper (PING)	An Internet program used to determine whether a specific IP address is accessible. It works by sending a packet to the specified address and waiting for a reply. PING is used primarily to troubleshoot network connections.
Preamble	A preamble is a signal, in the form of series of pulses, used in network communication to synchronize the transmission timing between two or more systems. There are two options, Short and Long. The Short option improves throughput performance.
Protocol	A set of agreed-upon rules for transmitting data between two devices. A user's computer must support the right protocols to communicate with other computers.
Reboot	When a computer is shut down and restarted, it is rebooting.
RJ-11	A connector/socket for two pairs (four wires) of twisted pair cables that is used primarily to connect telephone equipment in the United States.

RJ-45	A connector/socket for four pairs (either wires) of twisted pair cable that is used commonly to connect computers onto a local-area network, especially to the Ethernet. The only difference between an RJ-45 and RJ-11 connector is that the RJ-45 connector is slightly wider.
Router	A hardware device that connects two separately functional networks using the same or different protocols. Routers look at the destination addresses on the packets passing through them and then decide which route to send them on.
Request to Send (RTS) threshold	It sets the RTS threshold. Any packet size above this value, requires RTS. For packets smaller than this threshold value, RTS is not sent and the packet is transmitted directly to the wireless LAN.
Service Set Identifier (SSID)	A group name shared by all members of an IEEE 802.11 standard wireless network. Only wireless devices with the same SSID are allowed to establish connections.
Static IP address	A permanent IP address assigned to a computer (host) connected on a specific network.
Subnet or Subnetwork	Any network that is a part of a larger IP network and is identified by a subnet address.
Subnet Mask	A 32-bit string of a TCP/IP address — a part of which is the network address and the other part is the host address. A Subnet Mask is usually represented in dotted-decimal notation, for example, 255.255.255.0.
Switch	A device used for connecting nodes in a star topology, that is all nodes are connected to a central switch. By monitoring packets, a switch learns which devices are connected to its ports and then sends a packet to the appropriate port only.

Transmission Control Protocol/Internet Protocol (TCP/IP)	A suite of communication protocols that are used by computers or networking devices on the Internet so that they can communicate with each other. TCP/IP uses several protocols, the two main being TCP and IP.
10 Base-T	A wiring standard used for Ethernet networks that can transmit data at up to 10 Mbps transmission using baseband unshielded twisted pair cables. The maximum cable length allowed is 100 meters (330 feet).
Twisted pair cable	A cable that consists of two wires twisted together. This cable is less expensive but more brittle than a coaxial cable.
Universal Serial Bus (USB)	Universal Serial Bus — A plug-and-play interface that allows the user to attach a device without having to add an adapter card and turning off the computer.
Wide Area Network (WAN)	A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local-area networks (LANs).
Wired Equivalent Privacy (WEP)	A wireless security policy defined by the IEEE 802.11 working group. WEP uses the RC-4 40-bit encryption algorithm to scramble all data before it is transmitted. Vendors add proprietary encryption features to their software, taking the encryption level up to 128 bits.
Wi-Fi	Wi-Fi is promoted by the Wireless Ethernet Compatibility Alliance (WECA) — a collection of companies that places a stamp of certification on Wi-Fi products. It ensures the equipment's interoperability will all 802.11b compliant devices.



E

Service and Warranty Information

Service and Warranty Information

This chapter provides Technical Support and Warranty information for the following geographic regions:

- ☐ The Americas
- ☐ Asia

The Americas

Visit our online help website at **www.americas.creative.com/support** for help with installation, answers to frequently asked questions, or troubleshooting tips. Our website holds a wealth of information as well as up-to-the-minute software and driver upgrades.

Product Return



Retain your purchase receipt, as well as all packing and contents, until all product components are functioning to your satisfaction. They are required when you need to return the product to Creative.

To return a Creative product for a factory service, contact the Creative Technical Support office. Once the staff has verified the product is defective, you will be given a Return Merchandise Authorization (RMA) number.

When returning a product for factory service:

- ☐ Shipment to Creative is at your expense and you assume all risk. Ship the package through a carrier that provides proof of delivery; insure the shipment at full product value.
- ☐ Place the RMA number on the outside of the package.
- ☐ Use proper materials for packing the product for shipment.
- ☐ For free repair or replacement, you must include a copy of a dated proof of purchase (store receipt), proving that the product is still under Warranty

Creative may replace or repair the product with new or reconditioned parts, and the faulty parts or product will become the property of Creative.



If after consulting our online help, you still have an installation question on a Creative product, you may contact us by the following numbers (please have your system hardware and operating system configuration information and Creative product model and serial numbers available for the call):
Telephone (405) 742-6622.

Tech Support

BEFORE YOU CONTACT US

Please fill out the following information and be seated at your computer.

- Model #: _____ Serial # _____ (both found on the back of the device)
- Error message on the screen and how it came about:

- Information on the adapter card that conflicts with the product (if applicable):

- Hardware configuration information:

- IRQ line: (if applicable):

- DMA channel used (if applicable):

- Computer type and speed:

- Type and version of your operating system; Windows 95/98/Me/NT/2000/XP:

For comments or questions regarding our technical support, you can also contact us at the following address: Creative Labs, Inc., Technical Support, 1523 Cimarron Plaza, Stillwater, OK 74075.

Warranty Information

CREATIVE ("the manufacturer") warrants that equipment furnished will be free from defects in material and workmanship for a period of one (1) year from the confirmed date of purchase of the product new from the retail location. Upon written notice of any such defect, the manufacturer will, at its option, repair or replace the defective item under the terms of this warranty, subject to the provisions and specific exclusions listed herein.

This warranty shall not apply to equipment that has been previously repaired or altered outside our plant in any way. Nor will it apply if the equipment has been used in a manner exceeding its specifications or if the serial number has been removed.

We do not assume any liability for consequential damages as a result from our products use, and in any event our liability shall not exceed the original selling price of the equipment.

The equipment warranty of Creative Technology Ltd., shall constitute the sole and exclusive remedy of any buyer of the manufacturer's equipment and the sole and exclusive liability of the manufacturer, its successors or assignees, in connection with equipment purchase and in lieu of all other warranties expressed, implied or statutory, including, but not limited to, any implied warranty of merchantability or fitness and all other obligations or liabilities of the manufacturer, its successors or assignees.

Asia



Refer to the installation CD for your country's technical support contact information, located in
E:\Manual\Asia\Warranty
(where E: represents your CD-ROM drive).

Our company is happy to assist and support our customers. If you have trouble or questions relating to any purchased equipment, follow the steps below:

1. Duplicate the problem. Once a problem occurs, try to restart your hardware and software from the beginning and see if the problem happens again. If a problem is intermittent, finding it may be difficult because there may be more than one cause and, consequently, more than one solution.

We have answers to many commonly asked questions in Appendix E, "Service and Warranty Information".

2. Contact the dealer who sold you the equipment. Your dealer may be able to provide the assistance you need.
3. Call our Technical Support Hotline at (65) 6895-4100.
Our representatives will be glad to help you over the phone Monday through Friday from 9:00 a.m. to 6:00 p.m. (Singapore Time).
4. Be at your computer when you call technical support.
Our technicians often need to ask you to perform certain functions while on the phone.
5. In the event that you need to return a product, you will need to obtain a Return Merchandise Authorization (RMA) number. Equipment returned without a RMA number will not be accepted.
Please keep a record of your RMA number for future reference.
6. When returning equipment to us, please use the following procedures:
 - Ship the unit and package carefully in a strong corrugated cardboard box with plenty of packing material. Generally, we recommend United Parcel Service (UPS) or Federal Express, because each of those companies can easily track the shipment.
 - Include a note inside the package that has the RMA, along with your name and address. Also, write your RMA number on the shipping label and with your return address.



- Please send the package postage paid. We will not accept packages sent COD.
- Ship the well-packed equipment to:

Creative Technology Ltd.
31 International Business Park
Creative Resource
Singapore 609921
Attn: Asia Customer Service
RMA# (your RMA number here)

- Your equipment will be returned to you via United Parcel Service (UPS) ground service. Depending on your location, it could take two weeks to complete the return process.

Helpline Information

For South Africa

Creative Labs Africa (Pty) Ltd, 1F North East Wing, Corner K101 & Old Pretoria Road,
Midrand, JOHANNESBURG, SOUTH AFRICA

Mailing Address: P O Box 76761, WENDYWOOD 2144, Republic of SOUTH AFRICA

Operating Hours: 8:00 a.m.-12:00 p.m., 1:00 pm-5:00 p.m. Mon-Fri, except for
Public Holidays

Hotline: (27-11)805-0188

Fax: (27-11)805-0190

E-mail Form: <http://asia.creative.com/support/lookup.asp>

For Malaysia

Creative Labs Sdn Bhd, D-2-5 Megan Phileo Promenade, Jalan Tun Razak, 50400
KUALA LUMPUR, MALAYSIA

Operating Hours: 9:00 a.m.-6:30 p.m. Mon-Thurs & 9:00 a.m.-6:00 p.m. Fri, except
for Public Holidays

Hotline: (60-3)2164-7199

Fax: (60-3)2164-7198

E-mail: techsupport@clsb.creative.com

E-mail Form: <http://asia.creative.com/support/lookup.asp>



**For Hong Kong &
Macau**

Creative Labs (Hong Kong) Ltd, Unit 31, 9/F, Hong Kong International Trade & Exhibition Centre, No 1 Trademart Drive, Kowloon Bay, KOWLOON, HONG KONG
Operating Hours: 9:15 a.m.-5:45 p.m. Mon-Fri & 9:15 a.m.-12:45 p.m. Sat, except for Public Holidays
Hotline: (852)2148-6151/6152
Fax: (852)2331-2151
Web Site: <http://asia.creative.com/hongkong/>
E-mail Form: <http://asia.creative.com/support/lookup.asp>

**For the rest of the Asia
Pacific region**

Creative Technology Ltd, 31 International Business Park, Creative Resource, SINGAPORE 609921, Republic of SINGAPORE
Operating Hours: 9:00 a.m. - 6:00 p.m. Mon-Fri, except for Public Holidays
Hotline: (65) 6895-4100
Fax: (65) 6895-4029
Web Site: <http://asia.creative.com/>
E-mail Form: <http://asia.creative.com/support/lookup.asp>